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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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DICKSTEIN SHAPIRO LLP 1825 EYE STREET NW Washington, DC 20006-5403				FISCHER, MARK L
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/586,478	OGATA, TETSUYA	
	Examiner	Art Unit	
	MARK FISCHER	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 22 May 2008.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-19 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 22 May 2008 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the single housing configured as a single package containing the light source, the light splitting unit, and the one or more photo detectors (see Claim 9) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the connection between the light source and the optical disk.

Additionally, claims 2-18 are rejected for their dependence on parent claim 1.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato et al. (US Pat. No. 5,923,632).

Regarding claim 1, Kato et al. discloses an optical pickup apparatus for shining light on an optical disk (5) having two recording layers (5A, 5B) and for detecting reflected light from the optical disk, comprising: a light source (16); an optical system (19-24) situated on a path of a light beam returning from the optical disk inclusive of light reflected by a first recording layer (5A) of the optical disk (5) and light reflected by a second recording layer (5B) of the optical disk, said optical system including: a light condensing optical unit (22) to turn the returning light beam into a condensing light beam; and a light beam regulating unit (23) to extract from the condensing light beam a partial light beam corresponding to part of a cross section (inherent from Fig. 8, in which a cross section is projected onto surface S and part of the projection is extracted) of the condensing light beam; and one or more photo detectors (24A), situated between a position where the light reflected by the first recording layer contained in the partial light beam is condensed and a position where the light reflected by the second recording layer contained in the partial light beam is condensed (see Fig. 10), said one or more photo detectors having a first photo detecting section (E11) to detect the light reflected by the first recording layer and a second photo detecting section to detect the light reflected by the second recording layer (E12).

Regarding claim 2, Kato et al. discloses that the light beam regulating unit is a light splitting unit (Fig. 8, element 23) configured to split the condensing light beam into a plurality of light beams (Fig. 9, element 31A, 32A), said partial light beam corresponding to at least one of the plurality of light beams.

Regarding claim 3, Kato et al. discloses that the plurality of light beams includes a first light beam and a second light beam, and said one or more photo detectors includes:

a first photo detector (24A) having a photo detecting section (E11) to detect the light reflected by the first recording layer contained in the first light beam and a photo detection section (E12) to detect the light reflected by the second recording layer contained in the first light beam; and a second photo detector (e11) having a photo detecting section to detect the light reflected by the first recording layer contained in the second light beam and a photo detection section (e12) to detect the light reflected by the second recording layer contained in the second light beam.

Regarding claim 4, Kato et al. discloses that the light splitting unit is a light splitting prism (element 23 is a prism).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 5-8 rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US Pat. No. 5,923,632) in view of Freeman et al. (US Pat. No. 6,377,520 B2).

Regarding claim 5, Kato et al., discloses an apparatus comprising all of limitations of the instant claimed invention (see the 102 rejection above), but does not explicitly disclose that the light splitting unit is a hologram having a first hologram area and a second hologram area, the first light beam being diffraction created by the first hologram area, and the second light beam being diffraction created by the second hologram area. However, Freeman et al. discloses a light splitting unit (Fig. 4, element 41) that is a hologram having a first hologram area (44) and a second hologram area (45), and a first light beam being diffraction created by the first hologram area (see Fig. 4), and the second light beam being diffraction created by the second hologram area (see Fig. 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Kato et al. based on the teaching of Freeman et al. in order to detect partial halves of the light spot so that it can be determined whether the objective lens is closer to or further from the recording medium while determining the focusing error signal.

Regarding claim 6, Freeman et al. discloses that the first light beam and the second light beam are diffractions of different orders (see Fig. 4).

Regarding claim 7, Freeman et al. discloses that the first hologram area and the second hologram area have respective, different lens functions (obvious because the first hologram area (44) produces one beam while the second hologram area (45) creates another beam as seen in Fig. 4).

Regarding claim 8, Freeman et al. discloses that the first light beam and the second light beam are diffractions of an identical order (Fig. 6 shows diffractions of an identical order in which a refractive beamsplitter is used, where it is obvious that the refractive beamsplitter could

be substituted with another type of beamsplitter, the holographic element of Fig. 4, to perform the same function).

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US Pat. No. 5,923,632) in view of Hasegawa et al. (US Pat. No. 7,065,009 B1).

Regarding claim 9, Kato et al. discloses an apparatus comprising all of limitations of the instant claimed invention (see the 102 rejection above), but does not explicitly disclose that the light source, the light splitting unit, and the one or more photo detectors are placed in a single housing and configured as a single package. However, Hasegawa et al. discloses the integration of a light source, a light splitting unit, and one or more photo detectors placed in a single housing and configured as a single package (see Fig. 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Hasegawa et al. into the apparatus of Kato et al. in order to miniaturize and lighten the optical apparatus (Col. 5, lines 25-30).

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US Pat. No. 5,923,632) in view of Ogasawara (US Pub. No. 2005/0094507 A1).

Regarding claim 10, Kato et al. discloses an apparatus comprising all of limitations of the instant claimed invention (see the 102 rejection above), but does not explicitly disclose a drive unit configured to drive the light condensing unit in a direction of an optical axis of the light condensing unit. However, Ogasawara (US Pub. No. 2005/0094507 A1) discloses a light condensing unit (Fig. 13, element 42) being driven in a direction of an optical axis of the light

condensing unit. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Ogasawara into the apparatus of Kato et al. in order to compensate for spherical aberration of all layers of the recording medium.

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US Pat. No. 5,923,632) in view of Magnitski et al. (US Pat. No. 6,522,616 B1).

Regarding claim 11, Kato et al. discloses an apparatus comprising all of limitations of the instant claimed invention (see the 102 rejection above), but does not explicitly disclose a drive unit configured to drive the one or more photo detectors in a direction of an optical axis in respect of a photo detecting surface of the one or more photo detectors. However, Magnitski et al. discloses a photosensor moved along the Z axis (i.e. optical axis) (Col. 4, line 62 to Col. 5, line 3) where it is well-known that a drive unit are used to drive optical elements in an optical system where in this case the optical element is the photosensor. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Magnitski et al. into the apparatus of Kato et al. in order to improve the focus control operation even when the recording medium has multiple readable layers.

12. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US Pat. No. 5,923,632) in view of Tada et al. (US Pat. No. 6,480,444 B2).

Regarding claim 12, Kato et al. discloses an apparatus comprising all of limitations of the instant claimed invention (see the 102 rejection above), but does not explicitly disclose an opto-electrical device having a refractive index changing in response to an applied voltage, the opto-

electrical device situated on a path of the condensing light beam traveling from the light condensing unit. However, Tada et al. discloses an opto-electrical device (305) having a refractive index changing in response to an applied voltage (Col. 5, lines 32-48), the opto-electrical device situated on a path of the condensing light beam traveling from a light condensing unit (302). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Tada et al. into the apparatus of Kato et al. in order to improve the focus control even when the recording medium has multiple readable layers.

13. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US Pat. No. 5,923,632) in view of Maeda et al. (US Pat. No. 6,442,125 B1).

Regarding claim 13, Kato et al. discloses an optical disc apparatus for reproducing information from an optical disk having two recording layers, comprising: the optical pickup apparatus of claim 1 (see rejection of claim 1). But, Kato et al. does not explicitly disclose a signal obtaining unit configured to obtain a signal from a selected one of the two recording layers of the optical disk in response to an output signal of the optical pickup apparatus; and a reproducing unit configured to reproduce the information based on the signal obtained by the signal obtaining unit. However, Maeda et al. discloses a signal obtaining unit configured to obtain a signal from a selected one of the two recording layers of the optical disk in response to an output signal of the optical pickup apparatus (see Abstract and Col. 6, lines 47-56); and a reproducing unit configured to reproduce the information based on the signal obtained by the signal obtaining unit (Col. 1, lines 55-67). It would have been obvious to one of ordinary skill in

the art at the time the invention was made to incorporate the teachings of Maeda et al. into the apparatus of Kato et al. in order to obtain a clean reproduced signal from a selected layer of the multi-layer disk of Kato et al. without undesired interference from other layers.

Regarding claim 14, Maeda et al. discloses that the signal obtaining unit is configured to select an output signal inclusive of only the signal from the selected one of the two recording layers among output signals of the optical pickup apparatus (Col. 6, lines 47-56).

Regarding claim 15, Maeda et al. discloses that the signal obtaining unit is configured to subtract a signal component corresponding to another one of the two recording layers from the output signal of the optical pickup apparatus (Col. 6, lines 47-56).

14. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US Pat. No. 5,923,632) in view of Ogasawara (US Pub. No. 2005/0094507 A1) further in view of Maeda et al. (US Pat. No. 6,442,125 B1).

Regarding claim 16, Kato et al. in view of Ogasawara discloses an optical disc apparatus for reproducing information from an optical disk having two recording layers, comprising: the optical pickup apparatus of claim 10 (see rejection of claim 10); a drive control unit configured to control the drive unit in response to a signal indicative of which one of the two recording layers is selected for reproduction (¶ [0057]). However, Kato et al. and Ogasawara in combination do not explicitly disclose a signal selecting unit configured to select an output signal inclusive of only a signal from the selected one of the two recording layers among output signals of the optical pickup apparatus; and a reproducing unit configured to reproduce the information based on the signal selected by the signal selecting unit. Maeda et al. discloses a signal selecting unit

configured to select an output signal inclusive of only a signal from the selected one of the two recording layers among output signals of the optical pickup apparatus (see Abstract and Col. 6, lines 47-56); and a reproducing unit configured to reproduce the information based on the signal selected by the signal selecting unit (Col. 1, lines 55-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Maeda et al. into the apparatus of Kato et al. modified by Ogasawara in order to obtain a clean reproduced signal from a selected layer of the multi-layer disk of Kato et al. without undesired interference from other layers.

15. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US Pat. No. 5,923,632) in view of Magnitski et al. (US Pat. No. 6,522,616 B1) further in view of Tada et al. (US Pat. No. 6,480,444 B2) furthermore in view of Maeda et al. (US Pat. No. 6,442,125 B1).

Regarding claim 17, Kato et al. in view of Magnitski et al. discloses an optical disc apparatus for reproducing information from an optical disk having two recording layers, comprising: the optical pickup apparatus of claim 11 (see rejection of claim 11). Kato et al. in view of Magnitski et al. does not explicitly disclose a drive control unit configured to control the drive unit in response to a signal indicative of which one of the two recording layers is selected for reproduction. However, Tada et al. discloses a drive control unit configured to control a drive unit in response to a signal indicative of which one of the two recording layers is selected for reproduction (Col. 28, lines 39-46). Kato et al. in view of Magnitski et al. further in view of Tada et al. does not explicitly disclose a signal selecting unit configured to select an output

signal inclusive of only a signal from the selected one of the two recording layers among output signals of the optical pickup apparatus; and a reproducing unit configured to reproduce the information based on the signal selected by the signal selecting unit. However, Maeda et al. discloses a signal selecting unit configured to select an output signal inclusive of only a signal from the selected one of the two recording layers among output signals of the optical pickup apparatus (see Abstract and Col. 6, lines 47-56); and a reproducing unit configured to reproduce the information based on the signal selected by the signal selecting unit (Col. 1, lines 55-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the movable photosensors of Kato et al. in view of Magnitski et al. with the driving control of Tada et al. with the motivation to accommodate for a change in focal length with respect to a selected recording layer using a different optical element but while maintaining the same control configuration; and to combine the teachings of Kato et al. in view of Magnitski et al. further in view of Tada et al. with Maeda et al. with the motivation to be able to obtain a clean reproduced signal from a selected layer of the multi-layer disk of Kato et al. without undesired interference from other layers.

16. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US Pat. No. 5,923,632) in view of Tada et al. (US Pat. No. 6,480,444 B2) further in view of Maeda et al. (US Pat. No. 6,442,125 B1).

Regarding claim 18, Kato et al. in view of Tada et al. discloses an optical disc apparatus for reproducing information from an optical disk having two recording layers, comprising: the optical pickup apparatus of claim 12 (see rejection of claim 12). Tada et al. discloses a switching

unit configured to control the refractive index of the opto-electrical device (305) in response to a signal indicative of which one of the two recording layers is selected for reproduction (Col. 28, lines 39-46). Kato et al. in view of Tada et al. does not explicitly disclose a signal selecting unit configured to select an output signal inclusive of only a signal from the selected one of the two recording layers among output signals of the optical pickup apparatus; and a reproducing unit configured to reproduce the information based on the signal selected by the signal selecting unit. However, Maeda et al. discloses a signal selecting unit configured to select an output signal inclusive of only a signal from the selected one of the two recording layers among output signals of the optical pickup apparatus (see Abstract and Col. 6, lines 47-56); and a reproducing unit configured to reproduce the information based on the signal selected by the signal selecting unit (Col. 1, lines 55-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kato et al. in view of Tada et al. with Maeda et al. with the motivation to be able to obtain a clean reproduced signal from a selected layer of the multi-layer disk of Kato et al. without undesired interference from other layers.

17. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US Pat. No. 5,923,632) in view of Fujita et al. (US Pat. No. 5,532,987).

Regarding claim 19, Kato et al. discloses an optical pickup apparatus for shining light on an optical disk (5) having two recording layers (5A, 5B) and for detecting reflected light from the optical disk, comprising: a light source (16); an optical system (19-24) situated on a path of a light beam returning from the optical disk inclusive of light reflected by a first recording layer (5A) of the optical disk (5) and light reflected by a second recording layer (5B) of the optical

disk, said optical system including: a light condensing optical unit (22) to turn the returning light beam into a condensing light beam; and a light beam regulating unit (23) to extract from the condensing light beam a partial light beam corresponding to part of a cross section (inherent from Fig. 8, in which a cross section is projected onto surface S and part of the projection is extracted) of the condensing light beam; and one or more photo detectors (30A), situated between a position (29A) where the light reflected by the first recording layer (5A) contained in the partial light beam is condensed and a position (29C) where the light reflected by the second recording layer (5B) contained in the partial light beam is condensed, said one or more photo detectors having a first photo detecting section (E11) to detect the light reflected by the first recording layer and a second photo detecting section to detect the light reflected by the second recording layer (E12). Kato et al. does not explicitly disclose that the partial light beam is not exceeding half of the cross section as divided by a straight line passing through a center of the cross section. However, Fujita et al. discloses (Fig. 53) the use of a partial light beam not exceeding half of the cross section as divided by a straight line passing through a center of the cross section for the purpose of focus detection. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Fujita et al. into the apparatus of Kato et al. in order to allow a way to tell from the focus error signal whether the objective lens is closer or further from the recording medium (Col. 30, lines 30-45).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK FISCHER whose telephone number is (571) 270-3549. The examiner can normally be reached on Monday-Friday from 9:00AM to 6:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Fischer/
Examiner, Art Unit 2627
8/13/2008

/Thang V. Tran/
Primary Examiner, Art Unit 2627